



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,060	12/04/2003	Kelly Tidwell	5983P002	7669

8791 7590 11/09/2006

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

KIM, SUN U

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/728,060		TIDWELL, KELLY	
	Examiner		Art Unit	
	John Kim		1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/12/05 & 8/30/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment filed on August 30, 2006.
2. Claims 19, 21, 23, 26, 30, 32 and 39 are objected to because of the following informalities: Recitation of “the tubular woven mesh metal filter element” in claims 19, 21, 23, 26, 30, 32 and 39 should be changed to “the tubular woven pleated metal mesh filter element”.

Appropriate correction is required.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 8-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New recitation of “the annular arc segment shaped openings starting from the first side of the cap at locations within the outer diameter of the tubular woven filter element and **tapering outward to the second side of the cap to outside the outer diameter of the cap to define a smooth, expanding area flow path from the first side of the cap to the second side of the cap** and to an outer periphery of the tubular woven metal mesh filter element therein” in independent claims 8 and 19 is a new matter. Above bold and underline portion was not described in the specification including figures 4-7. Openings (36) in figures 4-7 do not taper outward to the second side of the cap to outside the outer diameter of the cap and also figures 4-7

Art Unit: 1723

do not show a smooth, expanding area flow path from the first side of the cap to the second side of the cap.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 28, 31-32, 35 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Recitations of "the member" in claims 28 and 31-32, "the inner end" in claims 28 and 31 and "the tubular member" in claims 35 and 39 lack positive antecedent basis.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8, 10-15, 17, 19, 22-25, 27, 30, 33-34 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (U.S. Patent No. 5,888,383) in view of Faria (U.S. Patent No. 5,066,391) and Hultgren (U.S. Patent No. 3,315,809).

Regarding Claim 8, Cox discloses a reusable filter having an internally threaded first opening (#7) at one end thereof for threading onto a filter mount on an engine, at least one second opening (#9) adjacent the first opening, and a face seal (#15) circumscribing the first and second openings for sealing against a filter mount, and a filter element (#30) therein, comprising: a can-like body (#3); a tubular woven metal mesh filter element (Col. 3, Lines 52-54); a cap (#2) having the first (#7) and second (#9) openings therein, the second openings being distributed

Art Unit: 1723

around the first opening; and a face seal (#15) on the cap; the cap being removably assembleable to the can-like body (Fig. 1); the tubular woven metal mesh filter element fitting within the enclosure defined by the can-like body and the cap and being imposed in the oil flow path between the first and second openings. However, Cox does not disclose that the annular arc segment shaped openings starting from the first side of the cap at locations within the outer diameter of the tubular woven filter element and tapering outward to the second side of the cap to outside the outer diameter of the cap. Faria discloses a reusable oil filter comprising annular arc segment openings (Fig. 1, #48) distributed around a first opening (#50) wherein the annular arc segment openings (#48) starting from the first side of the cap at locations within the outer diameter of the tubular woven filter element (#76) and tapering outward to the second side of the cap to outside the outer diameter of the cap. Hultgren teaches an oil filter comprising arc segment shaped openings providing restriction of oil to an absolute minimum (Col. 4, lines 3-33). It would have been obvious to one of ordinary skill in the art to modify the shape of the second openings of Cox with the annular arc segment openings of Faria in shape of arc segment shaped openings to minimize restriction of oil flow as suggested by Hultgren (Col. 4, lines 24-33).

Regarding Claim 19, Cox discloses a reusable filter having an internally threaded first opening (#7) at one end thereof for threading onto a filter mount on an engine, at least one second opening (#9) adjacent the first opening, and a face seal (#15) circumscribing the first and second openings for sealing against a filter mount, and a filter element (#30) therein, comprising: a can-like body (#3); a tubular woven, pleated metal mesh filter element (Col. 5, Lines 32-34); a bypass valve (#37) responsive to a predetermined pressure difference between the outer

Art Unit: 1723

periphery and inner periphery of the filter element; a cap (#2) having the first (#7) and second (#9) openings therein, the second openings being distributed around the first opening; and a face seal (#15) on the cap; the cap being removably assembleable to the can-like body (Fig. 1); the tubular woven, pleated metal mesh filter element fitting within the enclosure defined by the can-like body and the cap and being imposed in the oil flow path between the first and second openings. However, Cox does not disclose that the annular arc segment shaped openings starting from the first side of the cap at locations within the outer diameter of the tubular woven filter element and tapering outward to the second side of the cap to outside the outer diameter of the cap and screw threads on the cap and body. Faria discloses a reusable oil filter comprising annular arc segment openings (Fig. 1, #48) distributed around a first opening (#50) wherein the annular arc segment openings (#48) starting from the first side of the cap at locations within the outer diameter of the tubular woven filter element (#76) and tapering outward to the second side of the cap to outside the outer diameter of the cap and the cap (#40) being assembled to the can-like body (#20) by screw threads (Fig. 2). Hultgren teaches an oil filter comprising arc segment shaped openings providing restriction of oil to an absolute minimum (Col. 4, lines 3-33). It would have been obvious to one of ordinary skill in the art to modify the shape of the second openings of Cox with the annular arc segment openings of Faria in shape of arc segment shaped openings to minimize restriction of oil flow as suggested by Hultgren (Col. 4, lines 24-33) and modify the connection between the cap and can-like body of Cox with known connection using screw threads on the cap and can-like body as shown by Faria.

Regarding Claim 10, Cox discloses that the woven metal mesh filter element is pleated (Col. 5, Lines 32-34).

Art Unit: 1723

Regarding Claims 11 and 22, Cox discloses that the tubular woven metal mesh filter element has a closure member (Fig. 1, #32) permanently attached to a first end thereof, the tubular woven metal mesh filter element being assembleable in the reusable filter with a second end (#21) thereof facing the cap (#2).

Regarding Claims 12 and 23, Cox discloses an O-ring (#18) sealing the second end of the tubular woven metal mesh filter element against an inner surface of the cap (Fig. 1).

Regarding Claim 13, Cox does not disclose that the cap and the can-like body screw together. Faria discloses a reusable oil filter comprising the cap (#40) being assembled to the can-like body (#20) by screw threads (Fig. 2). It would have been obvious to one of ordinary skill in the art to modify the connection between the cap and can-like body of Cox with known connection using screw threads on the cap and can-like body as shown by Faria.

Regarding Claims 14 and 24, Faria discloses an O-ring seal (#44) between the cap and the can-like body (Fig. 2).

Regarding Claims 15 and 25, Cox discloses that the face seal on the cap is an O-ring (Col. 3, Lines 25-28).

Regarding Claim 17, Cox discloses a bypass valve (#37) responsive to a predetermined pressure difference between the outer periphery and inner periphery of the filter element.

Regarding Claims 27 and 30, Cox discloses that the bypass valve (Fig. 2, #37) is mounted on a member (#14) positioned between an inner end of the can-like body (#3) and a first end of the tubular woven metal mesh filter element (#30).

Regarding claims 33 and 37, Faria teaches that annular arc segment openings (#48) are defined by surfaces comprising sections of a cone (Fig. 1).

Art Unit: 1723

Regarding claims 34 and 38, Cox teaches that a region in the first side of the cap from an inner edge of the openings to a smaller diameter is recessed with respect to a region of the face seal (#5) on the cap (#2) (Fig. 2).

9. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria and Hultgren as applied to Claims 8 and 19 above, and further in view of Deibel et al. (U.S. Patent No. 6,221,242 B1).

Regarding Claims 9 and 21, Cox in view of Faria and Hultgren does not disclose the material of the filter element. Deibel et al teach a stainless steel woven metal filter element (Col. 6, Lines 34-37). It would have been obvious to one of ordinary skill in the art to modify the tubular woven wire mesh filter element of Cox in view of Faria and Hultgren with known stainless steel tubular woven metal filter element of Deibel et al because they are reusable oil filters and because it is a material of manufacture common in the filter art.

10. Claims 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria and Hultgren as applied to Claims 8 and 19 above, and further in view of Tettman et al. (U.S. Patent No. 5,679,244).

Regarding Claims 16 and 26, Cox in view of Faria and Hultgren discloses an O-ring (Cox, #19; Faria, #60) at the second end of the filter element but does not disclose another O-ring at the other end. Tettman et al teach an oil filter comprising an O-ring (Fig. 4, #44) at the other end of the filter element against a bottom surface of the can-like body. It would have been obvious to one of ordinary skill in the art to modify the reusable filter of Cox in view of Faria and Hultgren with provision of an O-ring at the other end of the filter element against a bottom

Art Unit: 1723

surface of the can-like body in order to prevent liquid from traveling through the housing without passing through the filter media as suggested by Tettman et al (Col. 2, Lines 58-60).

11. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria and Hultgren as applied to Claims 8 and 19 above, and further in view of Smith et al. (U.S. Patent No. 5,569,373).

Regarding Claims 18 and 20, Cox in view of Faria and Hultgren does not disclose an insert fitting. Smith et al teach a reusable oil filter comprising an internally and externally threaded insert fitting (#16). It would have been obvious to one of ordinary skill in the art to modify the reusable filter of Cox in view of Faria and Hultgren with provision of an internally and externally threaded insert fitting to allow the filter to be adapted to a wide variety of engines produced by various manufactures as suggested by Smith et al (Col. 3, Lines 11-17).

12. Claims 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria and Hultgren as applied to Claims 17 and 19 above, and further in view of Goddard (U.S. Patent No. 6,068,763).

Regarding Claims 28 and 31, Cox in view of Faria and Hultgren does not disclose feet. Goddard teaches an oil filter comprising a bypass valve (#60) spaced away from the can-like body (#14) by a plurality of feet (#92). It would have been obvious to one of ordinary skill in the art to modify the reusable filter of Cox in view of Faria and Hultgren with plurality of feet to permit flow of fluid through the bypass valve in the event of an excessive pressure differential across the filter element as suggested by Goddard (Col. 7, Lines 48-54).

Art Unit: 1723

13. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria, Hultgren and Goddard as applied to Claim 28 above, and further in view of Oohashi et al. (US Pub. No. US 2003/0106848 A1).

Regarding Claim 29, Cox discloses an O-ring sealing a second end of the tubular woven element against the inner surface of the cap (Col. 3, Lines 40-44) but does not disclose another O-ring sealing against the bypass valve. Oohashi et al teach an oil filter comprising an O-ring (#15) sealing the first end of the filter element (#5) against the member (#16) on which the bypass valve (#10) is mounted. It would have been obvious to one of ordinary skill in the art to modify the reusable filter of Cox in view of Faria, Hultgren and Goddard to provide an O-ring sealing the first end of the tubular woven mesh filter element against the member on which the bypass valve is mounted thereto to inherently prevent oil leak between the first end of the tubular woven mesh filter and the member on which the bypass valve is mounted thereto as shown in Oohashi et al.

14. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Faria and Hultgren as applied to Claim 19 above, and further in view of Oohashi et al.

Regarding Claim 32, Cox discloses an O-ring sealing a second end of the tubular woven element against the inner surface of the cap (Col. 3, Lines 40-44) but does not disclose another O-ring sealing against the bypass valve. Oohashi et al teach an oil filter comprising an O-ring (#15) sealing the first end of the filter element (#5) against the member (#16) on which the bypass valve (#10) is mounted. It would have been obvious to one of ordinary skill in the art to modify the reusable filter of Cox in view of Faria and Hultgren to provide an O-ring sealing the first end of the tubular woven mesh filter element against the member on which the bypass valve

Art Unit: 1723

is mounted thereto to inherently prevent oil leak between the first end of the tubular woven mesh filter and the member on which the bypass valve is mounted thereto as shown in Oohashi et al.

15. Applicant's arguments with respect to claims 8-39 have been considered but are moot in view of the new ground(s) of rejection.


Applicant presented Exhibits A-G in the response filed 9/1/06 to show that the claimed filter has higher flow rate with only a 2 psi pressure drop across the filter (Exhibit C) and higher burst pressure (Exhibit E) compared to prior art filters. However, such exhibits should be submitted in the form of 1.132 declaration. Applicant shows that the Exhibit C presents test results from Southwest Research Institute for a big truck filter in accordance with the present invention showing a flow rate of over 90 gallons per minute with a 2 psi pressure drop across the filter. However, Exhibit C shows 90.84 liters per minute which is equivalent to 20 gallons per minute. Also, filters tested in Exhibit C (Filter ID: 9400 Diesel) appear to be different filters in Exhibit E (Filter ID: 8400). It is not clear whether the award documented in Exhibit E is for the claimed filter since there is no claimed structure identified in the Exhibit E.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Kim
Primary Examiner
Art Unit 1723

JK

November 6, 2006